

REMARKS

By this amendment, Claims 13 and 21 have been amended. Claims 1-23 are pending in the application, with Claims 1, 19, and 21 being independent claims.

Objections to the Drawings

The Examiner objected to the drawing because the single view used in the application was numbered with the abbreviation “Fig.” Applicant has submitted herewith a corrected drawing sheet. Additionally, the replacement drawing has darker lines than the originally submitted drawing, addressing the draftsperson’s objections.

Objections to the Specification

The Examiner objected to the specification as referring to “Figure 1” instead of “The Figure”. The appropriate corrections have been made.

The Examiner further objected to the identification of collector 46 as emitter 46. Appropriate correction has been made.

Rejection of Claims Under 35 U.S.C. § 102(b)

The Examiner rejected Claims 1-16 and 18-20 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent Number 4,291,302 (King). Reconsideration of this rejection and allowance of these claims is respectfully requested based on the arguments below.

Claims 1 and 19 recite a voltage sensor. The use of a voltage sensor not only permits a determination of whether a bulb has failed, but also a determination of the number of bulbs that have failed. The voltage sensed by the voltage sensor will be at a maximum when the bulbs are working, and will decrease for each bulb that fails.

King et al does not disclose any voltage sensor. Although the Examiner cites Column 6, lines 11-15 of King as showing a voltage sensor, this section reads “The circuit also includes, in series between each lamp 10 and its controlling switch 12, a low value resistor 16, whose function is to generate a small potential difference between its end when the associated lamp 10 draws current.” Instead, King discloses a circuit having a combination of resistors and transistors that is configured to actuate the appropriate transistors to light a warning light upon the failure of a bulb, based on the changes in voltage within the circuit caused by the bulb failure, and resulting voltage inputs to the various transistors. Furthermore, this circuit disclosed in King provides no means of determining the number of bulbs that fail, because regardless of the number of failures, the result is only a single

warning light being lit. King therefore not only fails to teach or suggest the recitations of Claim 1, but also fails to provide the advantages of the claimed circuit.

Claim 13 further recites that the fault monitor is structured to be added to an existing electrical circuit by adding only a single connection to the circuit between a power supply and the load. Referring to the figure within the application, the only portion of the circuit necessary to provide power to the bulbs 20, 22, 24 is the connection between the voltage supply 12 through the switch 14 and bulbs 20, 22, 24, to the ground 18. The only connection made to this circuit is the connection 30. Once the connection 30 is made, in the illustrated example, the fault metering circuit may be connected or disconnected from the lamp bulb circuit by attaching or detaching the mating connectors 32, 34, providing only a single current path.

Referring to Figure 1 of King, multiple connections between the lamp bulb portion of the circuit and the metering portion of the circuit are illustrated. To light the lamps 10, all that is required is the battery 14, switch 12, lamp bulbs 10, and the electrical wiring therebetween. The resistors 16 between the switch 12 and lamp bulbs 10 are completely unnecessary to light the lamp 10, but must be installed at this location for monitoring purposes. In addition to having to modify the circuit itself for monitoring, it is also necessary to provide the connections T14, T15, T16, and electrical wire extending to the right of and electrically parallel to the switch 12, and another electrical wire extending to the right of and electrically parallel to the bulbs 10 towards the connection T4. King therefore shows the addition of five electrical connections plus two resistors to the lamp bulb actuation circuit itself, complicating the addition of the monitoring circuit to an existing circuit.

To clarify this distinction, Claim 13 has been amended by clarifying that the fault monitor is structured to be added to an existing electrical circuit by adding only a single connection.

Accordingly, Claims 1-16 and 18-20 are respectfully submitted to be in condition for allowance.

Rejection of Claims 1-5 and 8 Under 35 U.S.C. § 103(a)

The Examiner rejected Claim 17 under 35 U.S.C. § 103(a) as being obvious in light of King in view of U.S. Patent Number 5,065,104 (Kusko). Reconsideration of this rejection is respectfully requested.

Claim 17 is dependent from Claim 1 with intervening Claims 14-16. As explained above, King fails to teach or suggest each and every element of Claim 1.

Kusko discloses a ground fault detector. Kusko fails to supplement the disclosure of King in a manner that would provide for connection of a voltage sensor as recited within Claim 1, wherein a manner that would provide the advantage determining the number of bulbs not working properly, as provided by the present invention.

Accordingly, Claim 17 is respectfully submitted to be in condition for allowance.

Allowable Subject Matter

The applicant notes with appreciation the Examiner's indication that Claims 21-23 would be allowable if rewritten in independent form including all of the limitations of the base claim and intervening claims. Claim 21 has been amended to include the limitations of Claim 19, from which Claim 21 previously depended. Claims 22-23 are dependent upon Claim 21. Accordingly, Claims 21-23 are now respectfully submitted to be in condition for allowance.

CONCLUSION

For the above reasons, Claims 1-23 are now respectfully submitted to be in condition for allowance. If such is not the case, the Examiner is invited to telephone applicant's representative so that any additional issues may be resolved.

Respectfully submitted,

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